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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JONATHAN SCHNECK, SEAN O'HERRIN,
MICHEAL S. LEBOWITZ, and ABDEL HAMAD

Appeal 2009-012725
Application 09/642,660
Technology Center 1600

Before TONI R. SCHEINER, MELANIE L. McCOLLUM, and JEFFREY N. FREDMAN, *Administrative Patent Judges*.

SCHEINER, Administrative Patent Judge.

DECISION ON APPEAL[1]

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims 28-32 and 51-58, on the grounds of lack of written descriptive support and obviousness. We have jurisdiction under 35 U.S.C. § 6(b).

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[1] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

STATEMENT OF THE CASE

Claims 28 and 32 are representative of the subject matter on appeal:

28. A composition comprising a cell in which a molecular complex is bound to the surface of the cell, wherein the molecular complex comprises at least two first fusion proteins and at least two second fusion proteins, wherein:

(a) each of the two first fusion proteins comprises an immunoglobulin heavy chain, wherein the immunoglobulin heavy chain comprises a variable region, and an extracellular portion of a first transmembrane polypeptide; and

(b) each of the two second fusion proteins comprises an immunoglobulin light chain and an extracellular portion of a second transmembrane polypeptide;

wherein the at least two first fusion proteins and the at least two second fusion proteins associate to form the molecular complex, wherein the molecular complex comprises two ligand binding sites, wherein each ligand binding site is formed by the extracellular domain of a first transmembrane polypeptide and the extracellular domain of a second transmembrane polypeptide, wherein the affinity of the molecular complex for a cognate ligand is increased at least two-fold over a dimeric molecular complex consisting of the first and the second fusion protein.

32. The composition of claim 28 wherein a population of the molecular complexes is bound to the cell, wherein an identical antigenic peptide is bound to each ligand binding site.

The Examiner rejected claims 32, 56, 57, and 58 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description rejection, and also rejected claims 28-31 and 51-55 under 35 U.S.C. § 103(a) as unpatentable over the combined teachings of Matsui,[2] Dal Porto,[3] Chang,[4] and Harris.[5]

We reverse.

WRITTEN DESCRIPTION

The Examiner rejected claims 32, 56, 57, and 58 as failing to comply with the written description rejection. According to the Examiner, these "claims recite an 'antigenic peptide' as part of the invention" (Ans. 4), but the Specification doesn't describe "a representative number of molecular complexes that comprise the broad range of antigenic peptides claimed" (*id.*), or "the essential structural features of the antigenic peptides, and what core structure is required to perform[ ] the function of inducing an immune response" (*id.*).

Nevertheless, we agree with Appellants that the rejection is without merit, principally for the reasons set forth on page 6 of Appellants' Appeal Brief: "'antigenic peptides' are neither new nor unconventional in the art . . .

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[2] Kiyoshi Matsui et al., *Kinetics of T-cell receptor binding to peptide/I-E^k complexes: Correlation of the dissociation rate with T-cell responsiveness*, 91 PNAS USA 12862-12866 (1994).

[3] Joseph Dal Porto et al., *A soluble divalent class I major histocompatibility complex molecule inhibits alloreactive T cells as nanomolar concentrations*, 90 PNAS USA 6671-6675 (1993).

[4] Hsiu-Ching Chang et al., *A general method for facilitating heterodimeric pairing between two proteins: Application to expression of α and β T-cell receptor extracellular segments*, 91 PNAS USA 11408-11412 (1994).

[5] International Patent Application WO 94/09131 of William Joseph Harris et al., published April 28, 1994.

[and] do not require explicit description to be understood by those skilled in the art" in the context of the present invention.

Accordingly, the rejection of claims 32, 56, 57, and 58 under 35 U.S.C. § 112, first paragraph, is reversed.

OBVIOUSNESS

The Examiner rejected claims 28-31 and 51-55 as unpatentable over the combined teachings of Matsui, Dal Porto, Chang, and Harris.

As pointed out by Appellants, "[t]he claimed subject matter is a composition comprising a cell" and "[a] molecular complex with particular recited features is bound to the surface of the cell" (App. Br. 15). Appellants contend that "[e]ach of Matsui, Chang, Harris, and Dal Porto teaches soluble molecules" (Reply Br. 5), and "both the rejection and the Examiner's Answer consistently refer only to the advantages of producing soluble divalent molecular complexes" (*id.*). Appellants argue "[e]ven if . . . the combination of cited references taught or suggested the recited molecular complex - which [Appellants contend] it does not - the combination does not teach or suggest binding the molecular complex to the surface of a cell . . . [and] [t]he Examiner has not addressed this aspect of the claimed invention at all" (App. Br. 15).

"In proceedings before the Patent and Trademark Office, the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art." *In re Fritch*, 972 F.2d 1260, 1265 (Fed. Cir. 1992).

> A rejection based on section 103 clearly must rest on a factual basis . . . In making this evaluation, all facts must be considered. The Patent Office has the initial duty of supplying the factual basis for its rejection. . . . To the extent the Patent

> Office rulings are so supported, there is no basis for resolving doubts against their correctness. Likewise, we may not resolve doubts in favor of the Patent Office determination when there are deficiencies in the record as to the necessary factual bases supporting its legal conclusion of obviousness."

In re Warner, 379 F.2d 1011, 1017 (CCPA 1967).

Inasmuch as the Examiner has failed to address the claims' limitation requiring the molecular complex to be bound to a cell - or Appellants' repeated arguments regarding this limitation - we are constrained to reverse the Examiner's rejection of claims 28-31 and 51-55 as unpatentable over the prior art relied on.

SUMMARY

The rejection of claims 32, 56, 57, and 58 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description rejection is reversed.

The rejection of claims 28-31 and 51-55 under 35 U.S.C. § 103(a) as unpatentable over the combined teachings of Matsui, Dal Porto, Chang, and Harris is reversed.

REVERSED

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